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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,007	04/15/2004	Ryan James Berg	286685.124US1	7251
23483 7590 03/28/2007 WILMER CUTLER PICKERING HALE AND DORR LLP 60 STATE STREET BOSTON, MA 02109			EXAMINER KISS, ERIC B	
			ART UNIT 2192	PAPER NUMBER
			NOTIFICATION DATE 03/28/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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michael.mathewson@wilmerhale.com

<b>Interview Summary</b>	Application No.	Applicant(s)	
	10/825,007	BERG ET AL.	
	Examiner	Art Unit	
	Eric B. Kiss	2192	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Eric B. Kiss. (3) Peter Dichiaro (Reg. No. 38,005).  
 (2) Todd Ingberg (XP-2193). (4) Ryan Berg (Inventor).

Date of Interview: 21 March 2007.

Type: a) ☐ Telephonic b) ☐ Video Conference  
 c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
 If Yes, brief description: \_\_\_\_\_

Claim(s) discussed: \_\_\_\_\_


Identification of prior art discussed: \_\_\_\_\_

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

  
 Primary Examiner



Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Parties discussed and clarified features of the invention, focusing particularly on the development and transformation of models that incorporate the range of possible values for each modeled operand, this range of values in the model changing/evolving in accordance with operators in the source program that act upon the operand. Proposed amendments to claim 1 were discussed to more specifically incorporate these features, and the parties agreed that the proposed claim effectively conveyed these features. The examiner indicated that further search and consideration would be required in order to fairly determine patentability of the proposed claim upon receiving applicant's formal response.

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Date February 7, 2007

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To Examiner Eric B. Kiss  
USPTO

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From Peter M. Dichiara

Pages 3 (including cover)

Re US Patent Application No. 10/825,007  
Request for Examiner Interview

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109

Baltimore Beijing Berlin Boston Brussels London New York Oxford Palo Alto Waltham Washington

This facsimile transmission is confidential and may be privileged. If you are not the intended recipient, please immediately call the sender or, if the sender is not available, call +1 617 526 5413 and destroy all copies of this transmission. If the transmission is incomplete or illegible, please call the sender or, if the sender is not available, call +1 617 526 5413. Thank you.

PAGE 1/3 \* RCVD AT 2/7/2007 4:31:20 PM (Eastern Standard Time) \* SVR:USPTO-EFXXF-5/3 \* DNIS:2738300 \* CSID: \* DURATION (mm:ss):00:44

ATTACHMENT TO INTERVIEW SUMMARY  
3/21/2007

FEB 07 2007

PTOL-413A (03/05)  
Approved for use through 03/31/2007. OMB 0651-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

## Applicant Initiated Interview Request Form

Application No.: 10/825,007

First Named Applicant: Ryan James Berg

Examiner: Eric B. Kiss

Art Unit: 2192

Status of Application: Pending

## Tentative Participants:

(1) Examiner Kiss

(2) SPE

(3) Peter Dichiaro (Attorney)

(4) ~~John Peyton (Inventor)~~ Ryan Berg

Proposed Date of Interview: \_\_\_\_\_

Proposed Time: \_\_\_\_\_ (AM/PM)

## Type of Interview Requested:

(1) ☒ Telephonic (2) ☒ Personal (3) ☐ Video Conference

\*As preferred by Examiner or SPE

Exhibit To Be Shown or Demonstrated: ☐ YES☒ NO

If yes, provide brief description: \_\_\_\_\_

## Issues To Be Discussed

Issues (Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Continuation Sheet Attached					

## Brief Description of Arguments to be Presented:

[See attached]

An interview was conducted on the above-identified application on \_\_\_\_\_.

NOTE: This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).

This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible.

\_\_\_\_\_  
Applicant/Applicant's Representative Signature\_\_\_\_\_  
Examiner/SPE Signature

Peter M. Dichiaro

Typed/Printed Name of Applicant or Representative

38,005

Registration Number, if applicable

This collection of information is required by 37 CFR 1.133. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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3/21/2007  
ATTACHMENT TO INTERVIEW SUMMARY

Continuation Sheet: Issues to be Discussed.

Rejection of Claims in view of Wagner

**Brief Description:**

Wagner discusses formal methods and more particularly a technique that generates "constraints" or predicates upon analysis of the source code. Wagner observes source code statements and determines corresponding pre-defined constraints or predicates for the statements. The generated constraints are subjected to a "constraint solver" to determine if the source code has inherent pre-defined vulnerabilities. This in short is a system that checks the truth or falsity of the generated predicates or constraints (i.e., the constraints are proposition statements to be tested). There is mention of control flow and data flow (this was cited by the examiner) but the paper clearly considers control flow and data flow as other vehicles for generating yet more constraints to be tested. It does not mention control flow and data flow as a means of re-architecting Wagner's entire approach or deviating from the constraint-based approach.

The invention uses a different technique than Wagner. In short, the invention transforms the source code into a language independent intermediate representation that models the executable or operational semantics of the source code (e.g., including the control flow and data flow of the program). The invention subjects the intermediate representation/model to a virtual, or symbolic, execution to analyze the code as if it were executing. This is done to identify and determine vulnerabilities. It does not use constraints or predicate methods – unlike Wagner. We tried to capture this distinction in the prior amendment but this was subsequently determined to be unsatisfactory. We'd like to capture the distinction more clearly to everyone's satisfaction and to make sure the distinction is properly understood.

ATTACHMENT TO INTERVIEW SUMMARY

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3/21/2007